Become a Backup Ninja

Don McAllister

Host/Producer of ScreenCastsONLINE

February 2011

MacMania 11™

Session Content

- So why backup?

- Choosing a backup strategy

  - System Restore

  - File Level Restore

- Backup applications - One backup app to rule them all?

- Local, offsite and "cloud" based backups

- What everyone forgets!

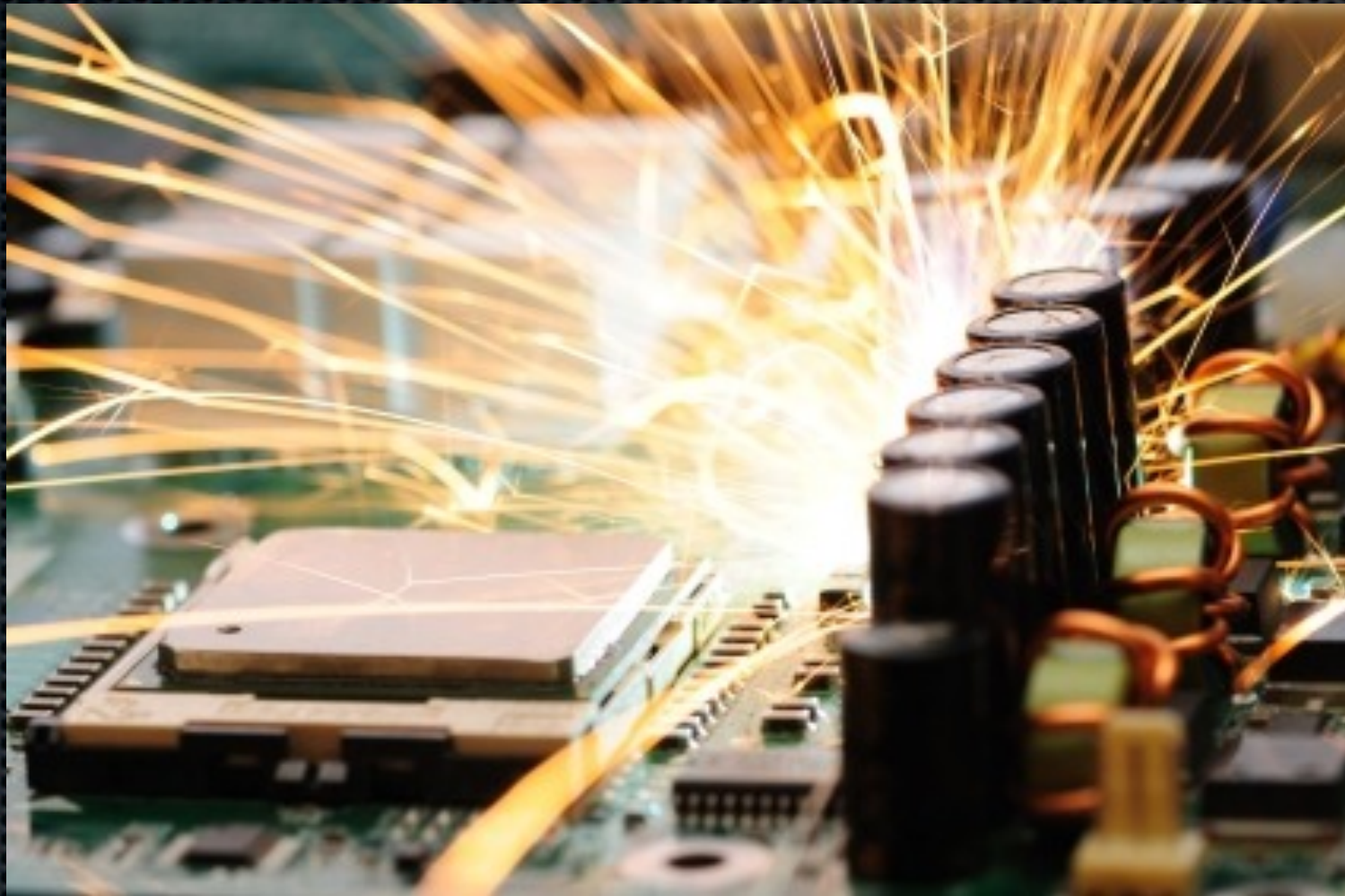# So Why Backup?

In the event of data loss or system crash.....

- Get you up and running with the minimum of downtime

- Recover information

- Minimise impact

- Peace of mind

Recovery!

So What Can Go Wrong?

Total System Failure

Hard Disk Failure

Theft

Fire or Flooding
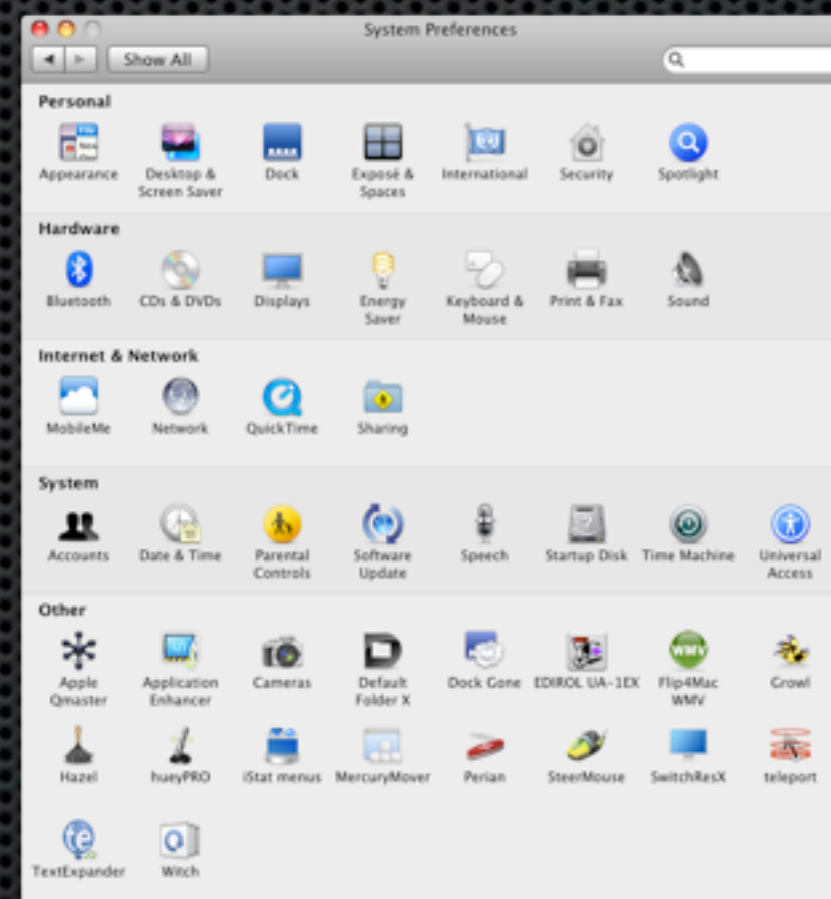
Depressed yet?

Recover What?

System Configuration

Business Data

Personal Data

Irreplaceable Photos

Media Files

Risk Assessment

* How critical is downtime to you or your business?

* How valuable the information is to you?

  * May well vary depending on information type

  * Can you afford professional recovery?

* Do you need versioning?

Backup Considerations

Full Machine Backup

File Level Backup

Offsite Backups

Onsite Backups

Media Types

Physical Backups

Restore Speed

Backup Speed

Restoration

The "No Brainer"

Time Machine
The Holy Grail of Backup Solutions?

Time Machine

The Holy Grail of Backup Solutions?

- Included as part of OS X Leopard - 10.5

- Supported with Time Capsule or External Drives

- Allows for file level or system level backup and restore

- Allows for versioning & searching across backups

- Self maintaining and works in the background

Time Machine
The Holy Grail of Backup Solutions?

Yes, but....

- Can be slow in operation & restore especially across the network

- Not very flexible and has limited configuration options as standard

- Performance hits - especially if creating multiple large files

Time Machine

The Holy Grail of Backup Solutions?

However....

The easiest and safest route to backups
for most general users.

A brilliant safety net for advanced users
when used in conjunction with
supplementary backup strategies.

Time Machine
The Holy Grail of Backup Solutions?

Demo

plus Time Machine editor

Time Machine
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Demo

plus Time Machine editor

http://timesoftware.free.fr/timemachineeditor/

Full Machine Backup

Backing up full systems

Full Machine Backup

**How quickly and easily
do you want to restore?**

Full Machine Backup

Full System Backup enabling "baremetal" restore

How fast would you like your restore?

Non Bootable - Slow

Boot & Install OS X from install disk

Run Software Update to download all patches

Use Migration Assistant to restore from Time Machine

Prepare for a long wait if using Time Capsule over Network

Full Machine Backup

Full System Backup enabling "baremetal" restore

How fast would you like your restore?

Bootable - Super Fast

Connect External FireWire (or USB on Intel) Drive

Select External Drive as Startup Disk in Sys Pref
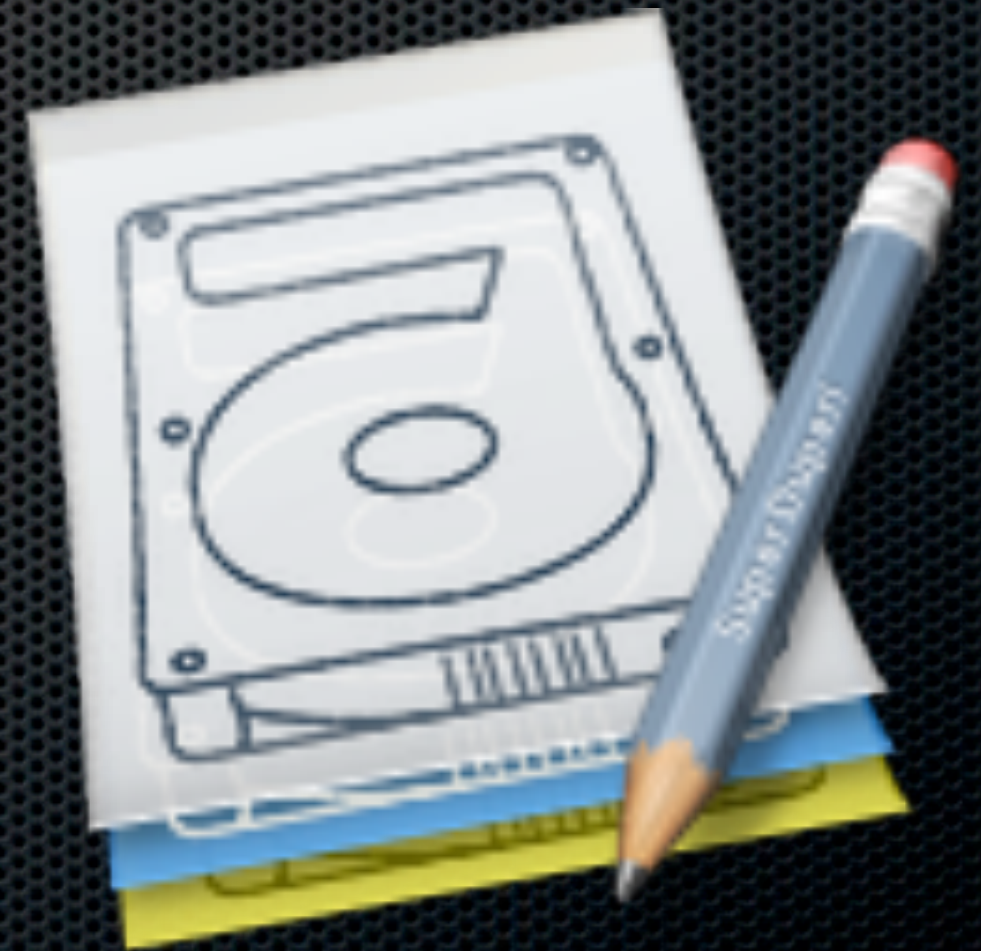
Reboot!

Or just reboot and hold down the ⌥ key!

Achieved using SuperDuper

SuperDuper
Shirt-Pockets.com

* Free version allows you to Clone drive

* Allows for booting from backup drive and full bootable system restore

* Full version allows "Smart Backups" and scheduling - $27.95

* Access files on backup easily - but no versioning

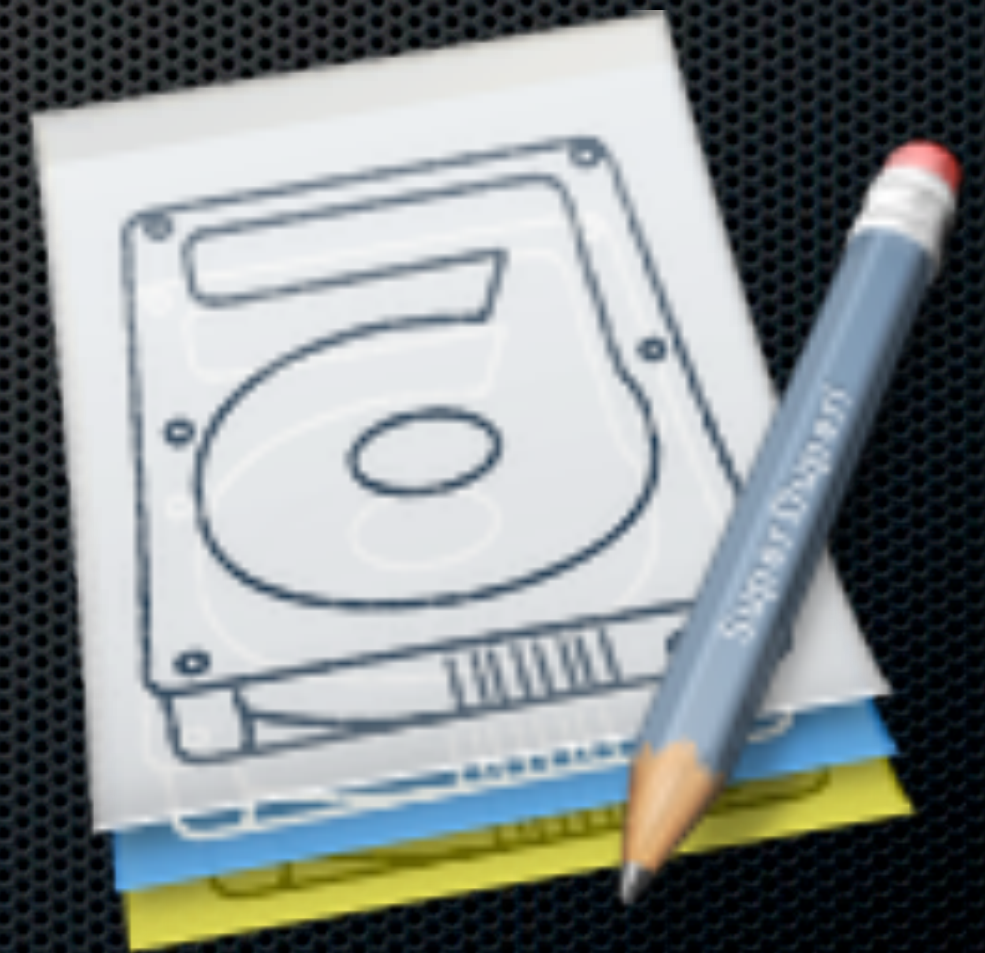* Use in conjunction with Time Machine

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SuperDuper
Shirt-Pockets.com

SuperDuper!

Copy [🖴 Macintosh HD ⇕] to [🗂 MBP_Superduper 1 ⇕]

using [Backup – all files ⇕]

1. Prepare to Copy Files ✓

✓ Prepared Macintosh HD
✓ Prepared MBP_Superduper
✓ Preserved Spotlight state on MBP_Superduper

2. Copy Files

→ Copying files from Macintosh HD to MBP_Superduper using Smart Update
   436 of 994,883 files evaluated, 164 files copied. Effective copy speed 38.87 MB/s.
   4.33 GB evaluated, 201.70 MB already up to date, 70.36 MB copied.

3. After Successful Copy

• Make MBP_Superduper bootable
• Restore Spotlight state on MBP_Superduper

[Stop]

Registered to: Don McAllister   Elapsed time: 00:07

External Drives - Tips
What to look for in an External Drive

- FireWire or USB

- Bootable from both - may be constrained by hardware

- Sizing?

  - SuperDuper - As big as the System Disk?

    - Exclude folders - downloads, scratch

  - TimeMachine or TimeCapsule

    - How far do you want to go back or how many Macs?

External Drives - Tips
What to look for in an External Drive

- Size for both - Dual partitions?

  - First Partition

    - Superduper - Same size as System Drive

  - Second Partition

    - Time Machine - For the remainder

External Drives - Tips
What to look for in an External Drive

- Might be worth considering off-site requirements

    - Open enclosures for cycling

    - NewerTech Voyage Quad - USB, FW and eSata

File Level Backup

Backing up individual folders or files

File Level Backup

Backing up individual folders or files

Media Considerations

- "Cloud" Based Services - "Infinite storage"

- RAID Enclosures - e.g. 5 x 2TB = 10TB x 4 = 40TB

- Drobo - Redundant Drives - Up to 16TB

- USB or FireWire Hard Drives - 1.5TB and above....

- DVDs - 4.7GB

- CDs - 660MB   TIP - How to efficiently save to CD or DVD

Create Images using Disk Utility

* Create CD or DVD sized disk images

* Save your backups to them

* Burn the image to Media when full

DEMO

Create Images using Disk Utility

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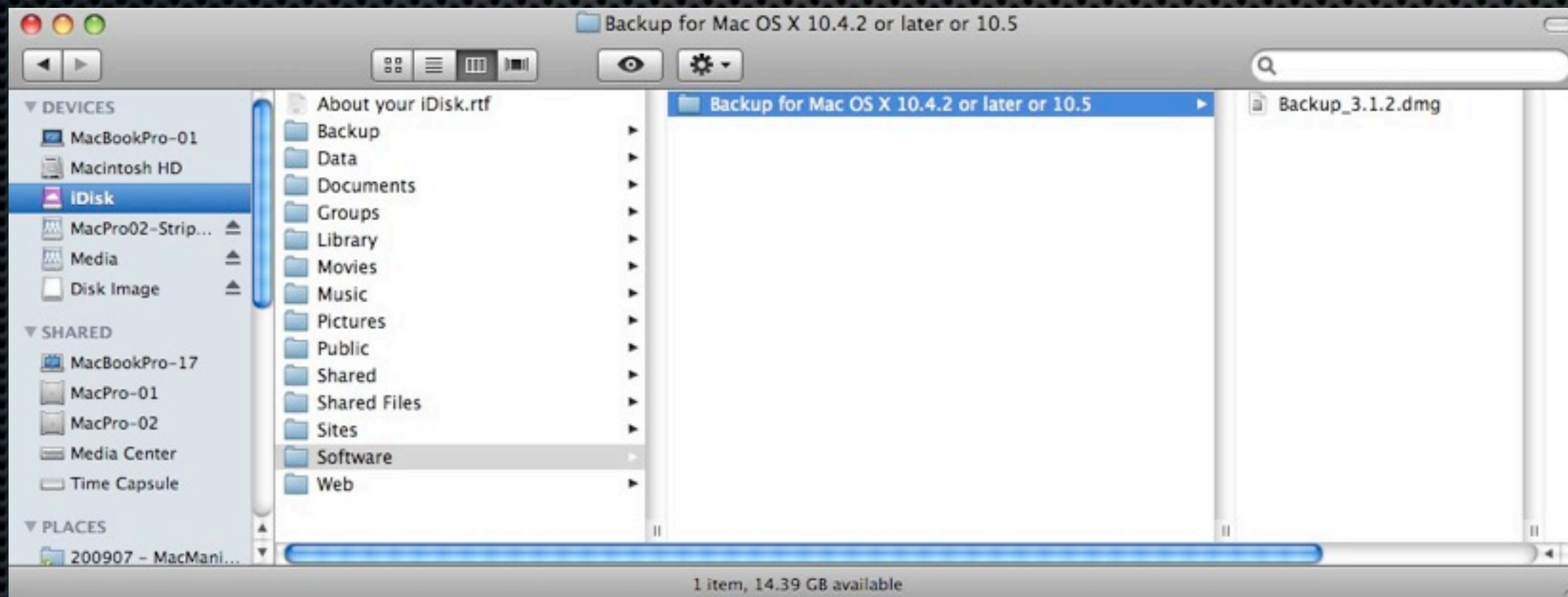
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DEMO

Applications for File Level Backup

Backing up individual folders or files

Backup 3 (MobileMe Users)

- Included as part of MobileMe

- Uses backup "Plans" for common data

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Welcome to Backup

Backup provides an easy and powerful way to back up important information on your computer such as the files you create and the settings you use for your applications.

To get started, you create Backup plans — lists of the items you want to back up, where to back them up, and when. If you don't select any of the preset plans below, you can create your own after clicking Continue. You can later modify any of the plans to suit your needs.

Choose Your Backup Plans

☐ **Home Folder**
Back up your home folder to your hard disk daily and to CD or DVD monthly.

☐ **Personal Data & Settings**
Back up your Address Book contacts, Stickies notes, iCal calendars, Safari settings, and Keychain settings to your iDisk daily.

☐ **iLife**
Back up the iLife data in your home folder to CD or DVD weekly.

☐ **iTunes Library**
Backs up iTunes playlists and all the files in the iTunes folder located in your home folder to CD or DVD monthly.

? (Restore)   (Continue)

Backup 3 (MobileMe Users)

- Included as part of MobileMe

- Uses backup "Plans" for common data

- Multiple backup targets:

  - iDisk, CD and DVD discs, FireWire disk, your own hard drive, a network server, or other mounted volumes.

  - Supports Scheduling

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ChronoSync
File or Folder Replication

- Scheduled backups to External Device

- Syncronise data between Macs

  - ChronoAgent

- Syncronise deletions and archive replaced files

- Econ Technologies - $40 and $10

One Backup App to Rule Them All!

CrashPlan
Local, Offsite and Cloud backups

- Free Version

  - Local Backups from Mac to Mac

  - Backup to other remote CrashPlan user

CrashPlan
Local, Offsite and Cloud backups

- Pro Version

  - Higher encryption levels

  - Backup to Cloud based service

  - Multi-Tiered pricing

Local Backups

Keeping secure backups on site

Local Backups
Keeping secure backups on site

- Fast - Quickly backup at LAN speeds

- Convenient - Create Schedules or even real time

- Easy to Restore - Fast and Quick

  - Time Machine for Versioning

  - Superduper for System Restore

  - CrashPlan for Project Work - Large media files, etc

Offsite Backups

Keeping secure backups offsite

Offsite Backups
Keeping secure backups offsite

- Don't store all your physical backup media on site!

- Copy CDs or DVDs and store in deposit box, neighbours house, at work...**anywhere except next to your Mac!**

- What about Hard Drives?

  - Create a RAID 1 pair - mirrored drives

  - Split the mirror

  - Ship one offsite and bring in a new drive

Offsite Backups
Keeping secure backups offsite

- Use CrashPlan to backup to a friends Mac!

    - Install client on both Machines

    - Friend passes invite code

    - No configuration necessary - start a scheduled backup across the Internet

Offsite Backups
Keeping secure backups offsite

"But I've got 600GB of files to back up!"

- Buy a 1TB USB drive

- Attach to your Machine

- Back up the files to the USB drive

- Disconnect and send to your friend. When he attaches, only the differences will be backed up

Offsite Backups
Keeping secure backups offsite

"But my files are confidential"

- Free CrashPlan

  - Encrypted before transmitting

  - Communication encryption - 256-bit AES

  - File Encryption - 128-bit

- CrashPlan +

  - File Encryption - 448-bit

Offsite Backups
Keeping secure backups offsite

"How easy is it to restore"

* Online

  * Individual files or Folders

  * Dependant of the bandwidth available

* Offline

  * Go and grab the drive and bring it back!

Feeling Generous?
Keeping secure backups offsite

- Friends and Family

    - You've already recommended Time Capsule for local backups

    - Got some spare disk capacity/bandwidth

    - Offer to host family backups!

    - Excuse to buy a Drobo!

Online Backups

Keeping secure backups online

Backup: The Rule of Three

Keeping secure backups online

- The three rules of backup

  - Three copies of data

  - Two different backup media

  - One off-site

If friend isn't an option, use a cloud solution

Online Backups
Keeping secure backups online

- Some features of CrashPlan Online Service

    - 1 computer 10GB $24.99 per year

    - 1 computer - Unlimited data - $49.99 per year

    - 2 - 10 computers - Unlimited data - $120 per year

Plus other features...

Online Backups

Keeping secure backups online

* Real time, Backup Sets

* Versioning

* Supports external attached volumes

    * Not limited to just internal drive

* Seeding via HD

* Restore via HD

Sync Services
Not true backup but cloud storage

- DropBox

- SugarSync

- Box.net

- Evernote

DropBox

Not true backup but cloud storage

* Free and Low Cost Options

  * 2GB Free or Premium Service 50GB - 100GB

* Locally cached

* Stored in the cloud for web access or sync

* Versioning

* Super quick

DropBox
Not true backup but cloud storage

- Public and private links for sharing

- Becoming defacto standard for pref syncing

    - TextExpander, 1password

    - iPad application support

- Web restore

- Mac compatibility & Selective Sync

What Everyone Forgets....

Don't fall into the trap!

Validate your backups

- Check the validity of your backups regularly

- Make sure you can read and open files

- Test your restore mechanisms

- Don't wait until you really need them!

Any Questions?

Contact Details
Don McAllister

screencastsonline@gmail.com